

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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| Applicant's or agent's file reference 042390.P3245 P2692 | FOR FURTHER ACTION <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small> | |
| International application No. PCT/US96/20573 | International filing date (day/month/year) 17 DECEMBER 1996 | (Earliest) Priority Date (day/month/year) 19 DECEMBER 1995 |
| Applicant INTEL CORPORATION | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).
2. ☐ Unity of invention is lacking (See Box II).
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing

☐ filed with the international application.
☐ furnished by the applicant separately from the international application,
 ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
☐ transcribed by this Authority.
4. With regard to the title, ☐ the text is approved as submitted by the applicant.
 ☒ the text has been established by this Authority to read as follows:

A method of performing different data type operations that is invisible to various operating system techniques
5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is:
 Figure No. 3A

☒ as suggested by the applicant.
☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.

☐ None of the figures.

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**NEW ABSTRACT**

A method for executing different sets of instructions that cause a processor (105) to perform different data type operations in a manner that is invisible to various operating system techniques. According to one embodiment of the invention, a data processing apparatus (105) executes a first set of instructions of a first data type on what at least logically appears to software as a single logical register file (310), which appears to be operated as a flat register file. In addition, the data processing apparatus executes a first instruction of a second data type using the logical register file (300), which appears to be operating as a stack referenced register file (340). Furthermore, the data processing apparatus alters all tags in a set of tags (320, 330) corresponding to the single logical register file (300, 310) to a non-empty state sometime between starting the execution of the first set of instructions and completing the execution of the first instruction.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US96/20573

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : G06F 9/34, 9/46, 9/00, 9/302

US CL : 395/392, 393, 569, 570, 591, 678

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 395/392, 393, 569, 570, 591, 678

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Microsoft Press Computer Dictionary, 2nd Edition

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

APS, JPOabs, IEEE, Computer Select CD ROM

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|--------------------|---|----------------------------|
| X, P ----- Y | US 5,560,035 A (GARG ET AL.) 24 SEPTEMBER 1996, col. 10, lines 53-57 | 1-10 ----- 11-20, 35 |
| Y | MARGULIS, NEAL. Osborne McGraw-Hill. i860 Microprocessor Architecture, Chapter 6: Floating Point Operations, 1990, pg. 129 & 245. | 11-35 |
| Y | US 5,127,098 A (ROSENTHAL ET AL.) 30 JUNE 1992, col. 5-6. | 21-34 |



Further documents are listed in the continuation of Box C.



See patent family annex.

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|----------|---|-----|--|
| * "A" | Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance | "T" | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" | earlier document published on or after the international filing date | "X" | document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "I." | document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" | document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "O" | document referring to an oral disclosure, use, exhibition or other means | "&" | document member of the same patent family |
| "P" | document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

11 FEBRUARY 1997

Date of mailing of the international search report

11 MAR 1997

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

PARSHOTAM LALL

Telephone No. (703) 305-9715

Joni Bell